

Bert Sun

✉ b83sun@uwaterloo.ca ☎ (647) 287-2875 in linkedin.com/in/bert-sun 🌐 bertsun.ca

Education

University of Waterloo

2021 – 2025 (Expected)

BMath Honours Data Science

Waterloo, Ontario

- Equivalent to joint Computer Science + Statistics, minoring in Pure Math

Work Experience

Software Engineer, Distributed AI Systems

Sept 2022 – Present

Huawei Technologies

Markham, Ontario

- Contributed to the prototyping of a high-performance data warehouse using **C++ and Python** utilizing novel algorithms and strategies to achieve a **14x speed increase** compared to industry standards, Spark and Flink.
- Developed and optimized **distributed algorithms and scheduling systems** for native vectorized SQL execution engines written in C++ resulting in overall **20% increased execution speed** and **10% reduced** idle time
- Discovered and resolved critical dangling reference bug not caught by unit tests and designed tests to catch unsafe memory release in concurrent threads.

Lead Full Stack Developer

Dec 2020 - Mar 2022

Aceway Canada

Mississauga, Ontario

- Pioneered development of auto parts catalog page serving **hundreds** of subscribed buyers with **RESTful back-end API** using **Node.js and Express**
- Directed team members to produce a working site with base features in under **1 month** and continuous deployment of additional time-sensitive features **monthly** requested by client
- Created a catalog comprising of over **10 000 parts** with **5 searchable fields** using relational database structures written in **SQL**

Lead Back-end Developer

June 2018 - Sept 2018

ConversationHEALTH

Toronto, Ontario

- Developed a chatbot utilizing **NLP and deep-learning** to communicate with users to discuss mental health
- Delivered a project exceeding management expectations, reaching 2000+ users in 1 month

Other Experience

Tech Lead, Motion Planning and Control

Sept 2022 – Present

WATonomous

Waterloo, Ontario

- Organizes development on the control module of an **autonomous vehicle** competing in the intercollegiate SAE AutoDrive Challenge achieving **2nd place overall** in North America

Lead Organizer, Director of Logistics

2018-2019

FraserHacks

Mississauga, Ontario

- Orchestrated a hackathon hosting over 125 students across the Peel District

Awards & Honors

Richard and Elizabeth Madter Entrance Scholarship

University of Waterloo

2021

- Sole recipient across over 2000+ students in the Math Faculty

Top 5 Plaque Recipient, Euclid Contest

University of Waterloo

2021

Canadian Math Olympiad Invitation

Canadian Mathematical Society

2021

Specialized Skills

Languages: C++, Python, SQL, HTML/CSS, JavaScript

Tools/Frameworks: Git, Linux, Node, NumPy, Pandas, TensorFlow, Spark

Concepts: Distributed Programming, Task Scheduling, Machine Learning, Database Design